

CATEGORICAL EXCLUSION REVIEW

BLM OFFICE: Kingman Field Office CX No. DOI-BLM-AZ-C010-2011-0033-CX Serial No.: AZA-32315

APPLICANT: British Petroleum Wind Energy North America (BPWE)

PROPOSED ACTION TITLE/TYPE: Amendment of Wind Energy Right-of-Way (ROW)

LOCATION OF PROPOSED ACTION: (See Enclosures for Project Area Legal Descriptions and proposed additional MET locations).

BACKGROUND

The applicant, British Petroleum Wind Energy North America (BPWE), has requested a right-of-way (ROW) authorization to construct, operate and maintain a 500 megawatt (MW) generating wind farm on approximately 31,338 acres of Federal land managed by the BLM and approximately 8,960 acres of Federal land managed by the Bureau of Reclamation (BOR), totaling approximately 40,298 acres of Federal land. The project area is located in the White Hills area approximately 40 miles northwest of Kingman, Arizona, approximately 9 miles south of the Colorado River, and approximately 20 miles southeast of Hoover Dam. Total electric generation capacity of the project is anticipated to be up to 500 MW. The project will consist of up to 335 wind turbine generators (WTGs), (may consist of construction in multiple phases), access roads, and ancillary facilities. The WTGs are anticipated to range in productive output from 1.5 to 3.0 MW each. To the extent possible, existing roads would be used for access to the project, supplemented with internal access/service roads to each WTG. Ancillary facilities may include pad-mounted transformers, an underground 34.5 kilovolt (kV) electrical collection system between the turbines, distribution connector lines (either underground or above-ground) tying the turbine strings to either a 345 or 500 kV electrical substation, and either a 345 or 500 kV overhead transmission line from the substation to a new switchyard where the project would interconnect with an existing transmission line in the area.

DESCRIPTION OF PROPOSED ACTION:

On April 19, 2011, BP Wind Energy North America, Inc. submitted an application to amend ROW AZA 32315 to include 3 additional MET towers on BLM administered lands within the project area. BP Wind Energy North America is currently authorized for 11 MET towers within the project area. The authorization for the MET towers would be for a 3 year term, and may be renewed consistent with 43 CFR 2807.22, plus the additional time that will allow the grant to expire on December 31 of the final year as required by 43 CFR 2805.11(b). The amended ROW will be subject to the terms and conditions of the original grant in addition to any additional terms and conditions as a result of implementation of BLM WO IM 2009-043.

Attachment A are the terms and conditions for MET towers and associated temporary access.

Attachment B is the legal descriptions for the installation and access for the additional MET towers, as well as the additional lands for reservation.

Attachment C is a representative figure of the proposed meteorological towers proposed.

Attachment D is a map of the proposed locations for MET locations and associated access.

PART I: PLAN CONFORMANCE REVIEW:

This proposed action is subject to the following land use plan: Kingman Resource Management Plan. Date Approved: March 1995. This proposed action has been reviewed for conformance with this plan (43 CFR 1610.5, BLM MS 1617.3) and is in conformance with Decision LR 13a, "All other minor rights-of-way would be evaluated through the environmental review process and granted or rejected on a case-by-case basis. Existing rights-of-way would be used when possible to minimize surface disturbance".

PART II: NEPA REVIEW:

A. Categorical Exclusion Review. This proposed action qualifies as a categorical exclusion under 516 DM 11.9. (E) (19), "Issuance of short-term (3 years or less) rights-of-way or land use authorizations for such uses as storage sites, apiary sites, and construction sites where the proposal includes rehabilitation to restore the land to its natural or original condition".

B. Departmental manual review. Department of Interior Manual 516 2.3 (A) (3) provides for the review of the following criteria to determine if exceptions apply to this project.

Criteria	Comment (Yes or No with supporting rationale)
1. Has significant adverse effects on public health or safety.	No
2. Have significant impacts on such natural resources and unique geographic characteristics as historic or cultural resources; park, recreation or refuge lands; wilderness areas; wild or scenic rivers; national natural landmarks; sole or principal drinking water aquifers; prime farmlands; wetlands (Executive Order 11990); floodplains (Executive Order 11988) national monuments; migratory birds; and other ecologically significant or critical areas.	No
3. Have highly controversial environmental effects or involve unresolved conflicts concerning alternative uses of available resources [NEPA Section 102(2)(E)].	No
4. Have highly uncertain and potentially significant environmental effects or involve unique or unknown environmental risks.	No
5. Establishes a precedent for future action or represents a decision in principle about future actions with significant environmental effects.	No
6. Have a direct relationship to other actions with individually insignificant but cumulatively significant environmental effects.	No
7. Have significant impacts on properties listed, or eligible for listing, on the National Register of Historic Places as determined by either the bureau or office.	No, properties in this area are not listed or eligible for listing in the National Register of Historic Places.
8. Have significant impacts on species listed, or proposed to be listed, on the List of Endangered or Threatened Species, or have significant impacts on designated Critical Habitat for these species.	No
9. Violate a Federal law, or a State, local, or tribal law or requirement imposed for the protection of the environment.	No
10. Have a disproportionately high and adverse effect on low income or minority populations (Executive Order 12898).	No
11. Limit access to and ceremonial use of Indian sacred sites on Federal lands by Indian religious practitioners or significantly adversely affect the physical integrity of such sacred sites (Executive Order 13007).	No
12. Contribute to the introduction, continued existence, or spread of noxious weeds or non-native invasive species known to occur in the area or actions that may promote the introduction, growth, or expansion of the range of such species (Federal Noxious Weed Control Act and Executive Order 13112).	No. Access will be on existing roads and trails. Minimal additional access will be needed to access the MET.

Preparer: / s / Melissa Warren Date: 6/7/2011

PART III: DECISION:

I have reviewed this plan conformance and NEPA compliance record and have determined that the proposed project is in conformance with the approved land use plan, none of the exceptions described in

516 DM 2, Appendix 2, apply, and that no further environmental analysis is required. It is my decision to implement the project, as described above, with the mitigation measures identified below.

Mitigation Measures/Other Remarks:

The original right-of-way grant terms, conditions and stipulations will apply.

Attachment A are the terms and conditions for MET towers and associated temporary access.

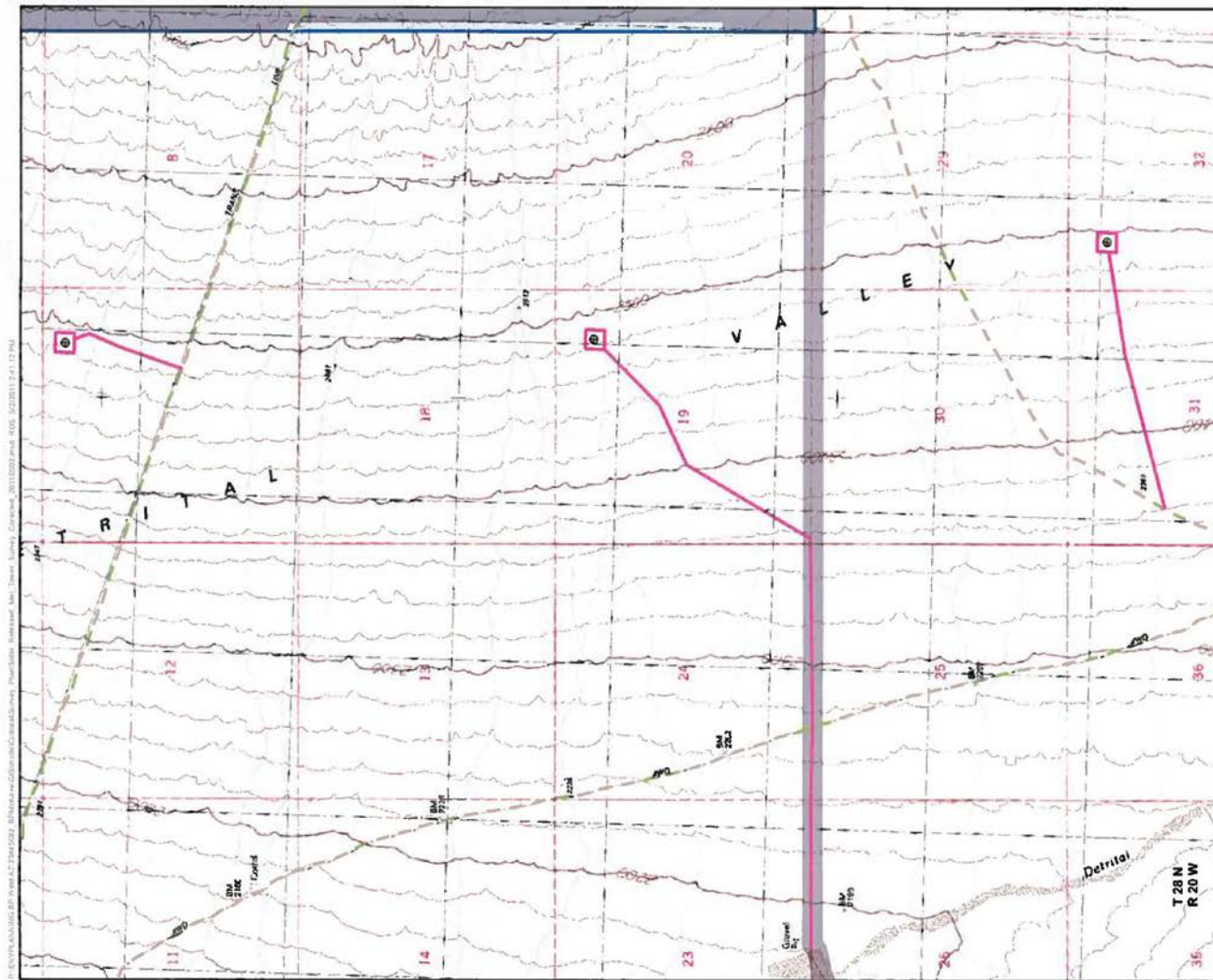
Attachment B is the legal descriptions for the installation and access for the additional MET towers, as well as the additional lands for reservation.

Attachment C is a representative figure of the proposed meteorological towers proposed.

Attachment D is a map of the proposed locations for MET locations and associated access.

Authorized Official: /s / Ruben A. Sanchez
7/14/2011

Date:



Supplemental Cultural Resource Survey for Met Towers

(2 May 2011)

Figure 1

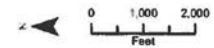
Mohave County Wind Farm Project

Legend

- Proposed Met Tower Location
- Proposed Survey for Met Tower
- Proposed Survey for Met Tower Access Road
- Previously Surveyed
- ▭ Mohave County Wind Farm Project
- - - Existing Unimproved Road



Sources:
Project Area Boundary: BPWS North America,
Inc data transfer 09/09/2009
Base Map Source: Sonoran Mountain SW Arizona USGS
7.5 Minute Quadrange (30114G1)
P.3(SW), NAD 1983, UTM Zone 11, USGS
data purchase 1999-2003



**BP Wind Energy North America Inc.
Proposed Application for Wind Energy Site Testing and
Monitoring and Development Right-of-Way Grant in the Vicinity of
Mohave County, Arizona**

7. Project Description:

This application on Standard Form 299 proposes a new application for three meteorological towers and surrounding land as described in **Attachment B**, an area which encompasses approximately 10,880 acres. BP Wind Energy North America Inc. (BPWE) has also included a map (**Attachment C**) which indicates the meteorological towers and associated land along with the wind project application currently under consideration, AZA-32315.

The proposed ROW would provide exclusive rights for wind energy development in the Project Area, consistent with the requirements and procedures outlined in the *ELM Instruction Memorandum 2006-216* dated August 24, 2006 ("BLM IM").

BPWE is seeking to add this land because BPWE believes the wind resource in this area is good and is consistent with the application to the Bureau of Land Management under application AZA-32315. BPWE plans to install the proposed three monitoring towers on the land as identified in **Attachments C & D**. These towers are for the purpose of characterizing the wind energy, for correlation with data taken on lands immediately northeast for the same wind project, and for micro-siting of wind turbines once the project enters the detailed design phase. BPWE plans to install these towers within three months upon approval of the application.

(a) Type of system or facility:
Same as AZA-32315.

(b) Related structures and facilities: Same as AZA-32315 as filed with BLM. See also Attachment D that includes the proposed locations of the Meteorological towers to be constructed shortly after approval of the application.

(c) Physical specifications: Same as AZA-32315 as filed with BLM.

(d) Term of years needed: Same as AZA-32315 as filed with BLM (3 years).

(e) Time of year of use or operation: Same as AZA-32315 as filed with BLM.
(continuous)

to Standard Form 299: Application for Transportation and Utility Systems and Facilities
on Federal Lands

(f) *Volume or amount of product to be transported:* Same as AZA-32315 as filed with BLM.

(g) *Duration and time of construction:* Same as AZA-32315 as filed with BLM.

(h) *Temporary work areas needed for construction:* Same as AZA-32315 as filed with BLM.

12. Give statement of your technical and financial capability to construct, operate, maintain, and terminate system for which authorization is being requested.

Same as AZA-32315 as filed with BLM.

13a. Describe other reasonable alternative routes and modes considered.

Other sites in the general area would be considered additional potential sites for wind energy development, not reasonable alternatives to the Project Area.

b. Why were these alternatives not selected?

Other possible wind energy sites in the general area may have environmental impacts, visual impacts, restricted road access, limited transmission options, competing land uses, and other issues of concern.

c. Give explanation as to why it is necessary to cross Federal Lands.

Large expanses of land managed by the BLM are believed to have promising wind resources. See BLM Record of Decision (or Implementation of a Wind Energy Development Program and Associated Land Use Plan Amendments) issued December 2005 ("BLM ROD"). The BLM encourages its Districts to consider and, where appropriate, provide for the use of this resource as one of its multiple uses. As the BLM lands identified in this application are believed to have wind energy potential, it will be necessary to cross these lands in order to install and maintain meteorological towers to measure wind resources.

14. List authorizations and pending applications filed for similar projects which may provide information to the authorizing agency.

The Mohave County Wind Farm project is currently in the NEPA EIS process, and this land was identified as an additional potential location for wind turbines during the development of the alternatives for analysis in the EIS.

15. Provide statement of need for project, including the economic feasibility and items such as: a) cost of proposal; b) estimated cost of next best alternative; and, c) expected public benefits.

The land described in Attachment B to this Application is necessary because it is believed to have a wind resource that would be beneficial to the wind energy project as a whole and support the goals of the nation for renewable energy. This land allows a more flexible process for the selection of alternatives for analysis in the development of the EIS, while retaining an ultimate project size comparable to that originally proposed by BPWE. This Application is consistent with the BLM's comprehensive Wind Energy Development Program to support wind energy development on public lands (see the BLM ROD). Wind energy serves the national interest in energy independence and the potential role that renewable energy, in particular wind energy, can play in providing clean, non-fossil fuel based energy.

- a) *Cost of proposal:* Same as AZA-32315
- b) *Estimated cost of next best alternative:* Same as AZA-32315
- c) *Expected public benefits:* The expected public benefits would be the opportunity to increase the utilization of renewable energy resources on Federal lands. This would lead to a corresponding reduction in greenhouse gas emissions associated with climate change and other air pollutants that would be produced from an equivalent amount of fossil fuel-fired electric generation.

16. Describe the probable effects on the population in the area including the social and economic aspects, and the rural lifestyles.

Amendment of ROW AZA-32315 to include the land described in Attachments B & C will have insignificant or no social or economic effects on the local population, or rural lifestyles. There are possible economic benefits associated with the construction and operation jobs, property taxes, and local materials purchased.

17. Describe likely environmental effects that the proposed project will have on: a) air quality; b) visual impact; c) surface and ground water quality and quantity; d) the control or structural change on any stream or other body of water; e) existing noise levels; and f) the surface of the land, including vegetation, permafrost, soil, and soil stability.

- a) *air quality:* Same as AZA-32315
- b) *visual impact:* Same as AZA-32315
- c) *surface and ground water quality and quantity:* Same as AZA-32315
- d) *the control or structural change on any stream or other body of water:* Same as AZA-32315.
- e) *existing noise levels:* Same as AZA-32315

Attachment A

to Standard Form 299: Application for Transportation and Utility Systems and Facilities on
Federal Lands

f) *the surface of the land, including vegetation, permafrost, soil and soil stability:* Same as AZA-32315

18. Describe the probable effects that the proposed project will have on a) populations of fish, plant life, wildlife, and marine life, including threatened and endangered species; and b) marine mammals, including hunting, capturing, collecting, or killing these animals.

Same as AZA-32315

19. State whether any hazardous material, as defined in this paragraph, will be used, produced, transported, or stored on or within the right-of-way or any of the right-of-way facilities, or used in the construction, operation, maintenance, or termination of the right-of-way or any of its facilities. ["Hazardous material" definition deleted]

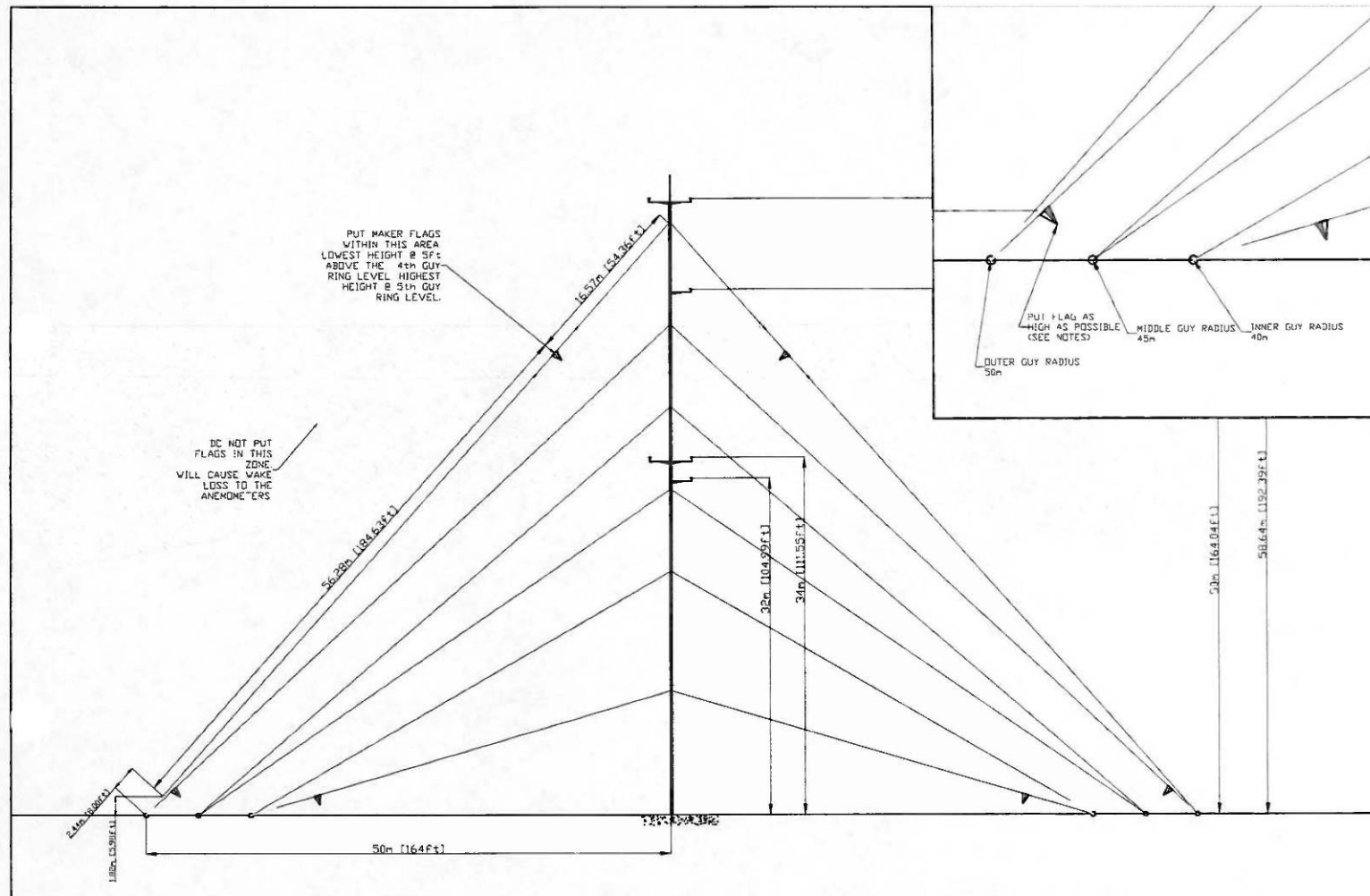
Same as AZA-32315

20. Name all the Department(s)/Agency(ies) where this application is being filed.

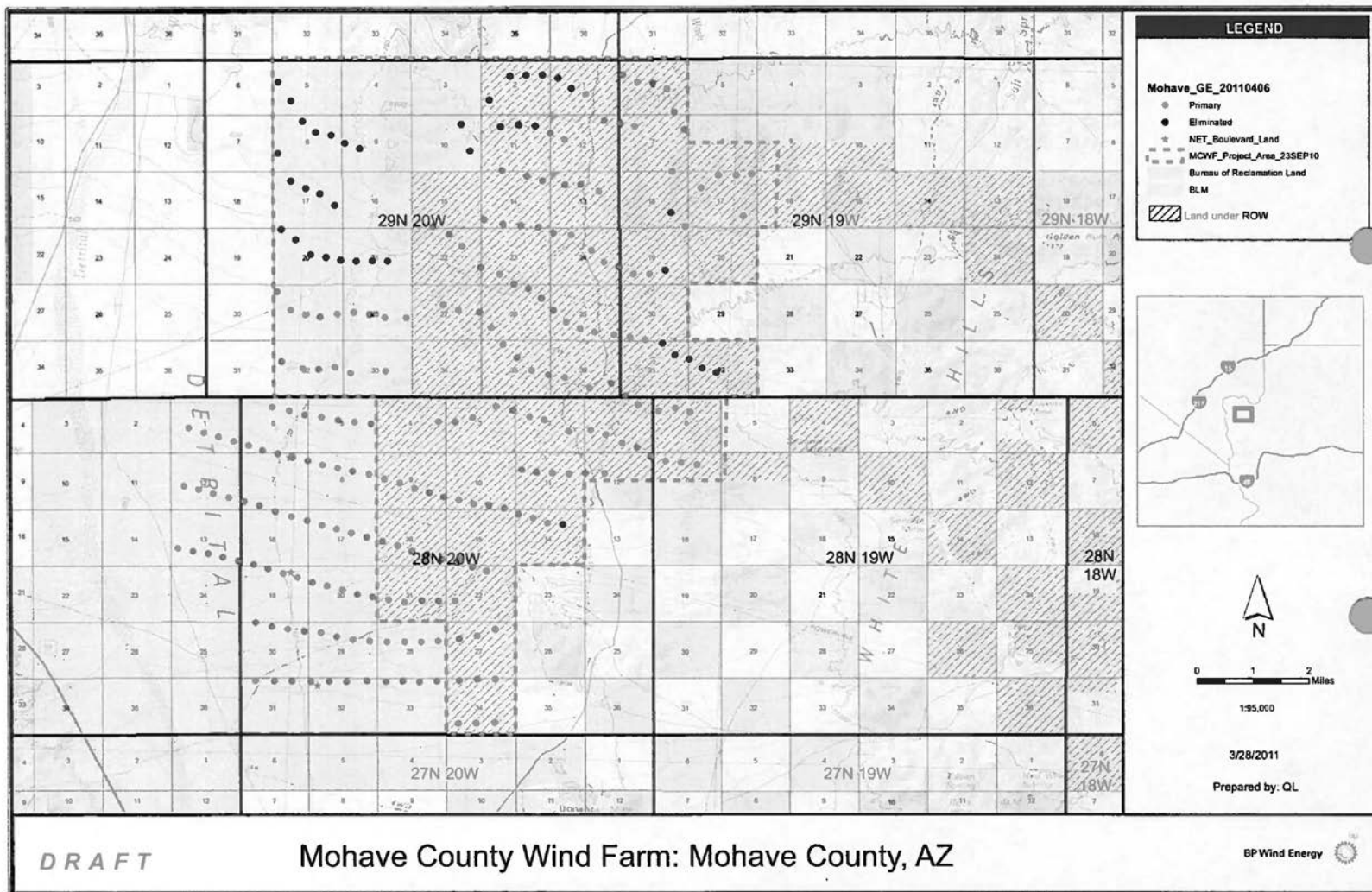
None, other than the BLM's Kingman Field Office

Attachment B
BP WIND PROJECT AREA

	Acres
T. 28 N., R. 20 W.,	
Sec. 5, S2N2, 52, Lots 1-4;	641.86
Sec. 6, S2NE, SENW, E2SW, SE, Lots 1-7;	632.13
Sec. 7, E2, E2W2, Lots 1-4;	631.48
Sec. 8, All;	640.00
Sec. 17, All;	640.00
Sec. 18, E2, E2W2, Lots 1-4;	632.18
Sec. 19, E2, E2W2, Lots 1-4;	632.82
Sec. 20, All;	640.00
Sec. 28, All;	640.00
Sec. 29, All;	640.00
Sec. 30, E2, E2W2, Lots 1-4;	633.36
Sec. 31, E2, E2W2, Lots 1-4;	634.36
Sec. 32, All;	640.00
Sec. 33, All.	640.00
 T. 28 N., R. 21 W.,	
Sec. 1, S2N2, 52, Lots 1-4;	639.84
Sec. 12, All;	640.00
Sec. 13, All.	640.00
 Total	 10,838.03



alternativenergy <small>Powered by BP</small>	STANDARD TOWER INSTALLATION SCHEMATIC	60mHD MET TOWER CONFIGURATION PROPOSED INSTALLATION ZONES FOR MARKER SLEEVES AND FLAGS.
NOTES: <ol style="list-style-type: none"> 1. 8 x Yellow sleeves 2. 8 Flags as shown, as high as possible (reachable from the ground without taking tower down) 		PROPRIETARY AND CONFIDENTIAL
<small>FILE REF.: C:\AutoCAD\XIRON_MAP\BP\AE standard met config_50-60 TOWERS rev1.dwg</small>	<small>DRAWN BY: MW</small>	<small>CHECKED BY: ALG</small> <small>DATE: 7 March 2007</small> <small>SHEET 1 OF 1</small>



Attachment A

AZA-32315 TERMS & CONDITIONS

June 7, 2011

BP WIND ENERGY NORTH AMERICA WHITE HILLS

MOHAVE WIND ENERGY PROJECT

METEOROLOGICAL TOWERS and ACCESS ROADS

"MET TOWER2"

1. In case of change of address, the Holder shall immediately notify the BLM Authorized Officer.
2. This grant is subject to all valid rights existing on the effective date of this grant.
3. A copy of these stipulations, including exhibits and the Plan of Development, shall be on the project area and available to persons directing construction.
4. The Holder shall conduct all activities associated with the construction, operation, termination of the right-of-way within the authorized limits of the right-of-way.
5. There shall be no surface disturbance associated with the installation of the meteorological (met) towers, other than driving of guy anchors and base plate stakes.
6. A biologist approved by the Authorized Officer, will be present for all off road activities to ensure nests of migratory birds and potential desert tortoise burrows are avoided.
7. Any cultural and/or paleontological resource (historic or prehistoric site or object) discovered by the Holder, or any person working on his behalf, on public or Federal land, shall be immediately reported to the Authorized Officer. The Holder shall suspend all operations in the immediate area of such discovery until written authorization to proceed is issued by the Authorized Officer. An evaluation of the discovery will be made by the Authorized Officer to determine appropriate actions to prevent the loss of significant values. The Holder will be responsible for the cost of evaluation and any decision as to proper mitigation measures will be made by the Authorized Officer after consulting with the Holder.
8. Pursuant to 43 CFR 10.4(g), the Holder of this authorization must notify the Authorized Officer, by telephone, with written confirmation, immediately upon the discovery of human remains, funerary objects, sacred objects, or objects of cultural patrimony (as defined at 43 CFR 10.2). Further, pursuant to 43 CFR 10.4(c) and (d), the Holder must

stop activities in the immediate vicinity of the discovery and protect it from your activities for 30 days or until notified to proceed by the Authorized Officer.

9. The Holder shall comply with all applicable Federal Aviation Administration requirements for lighting, painting, or marking the structures authorized by this grant. Tower height shall be limited to less than 199' above ground level so as to not require lighting.
10. If 'cross country' access or driving on reclaimed roads is necessary, clearing vegetation or grading a roadbed will be avoided wherever practicable. All construction and vehicular traffic shall be confined to the ROW or designated access routes, roads or trails unless otherwise authorized in writing by the AO. All temporary roads used for construction shall be rehabilitated after construction is completed. Only one road or access route will be permitted to each site requiring access. After construction is completed, the holder will rake all vehicle tracks for the first 100 feet off of existing roads to limit the spread of new roads and for the first 100 feet of reclaimed roads to limit the driving on reclaimed roads.
11. Access to the MET towers for changing data logger chips or retrieving data shall be by existing road access or by foot.
12. Avoid running over/crushing plants along the right-of-way. Drive around plants where possible. Met towers will be placed so that no state protected plant species will be damaged or relocated.
13. The Holder shall provide the Authorized Officer as-built locations for each met tower using NAD83 UTM's. The as-built shall be provided within 30 days of tower construction.
14. The Holder shall install the met towers within 12 months of the effective date of this grant and shall provide proof of their construction to the Authorized Officer no later than 30 days after construction. If the met towers have not been installed within the subject 12 month period, the Holder shall: provide the Authorized Officer just cause as to the nature of any delay, the anticipated date of installation of facilities, and evidence of progress toward their installation.
15. The Holder shall notify the Arizona Game and Fish Department (AGFD) of the locations of their met towers within 15 days of their installation. The Holder shall make similar notification to the U.S. Department of Defense, Civil Air Patrol, or other aviation regulatory agencies, if required by them.
16. Holder shall minimize disturbance to existing fences and other improvements on public land. The Holder is required to promptly repair improvements to at least their former state. Functional use of these improvements will be maintained at all times. Holder will contact the owner of any improvements prior to disturbing them. When necessary to pass through a fence line, the fence shall be H-braced on both sides of the passageway prior to

cutting the fence.

17. The holder will thoroughly power wash and remove all vegetative material and soil before transporting equipment to the construction site to help minimize the threat of spreading noxious and invasive weeds. This includes trucks, trailers, and all other machinery. The holder shall be responsible for weed control on disturbed areas within the limits of the right-of-way or construction site. The holder is responsible for consultation with the authorized officer and location authorities for implementing acceptable weed treatment methods. Any use of chemical treatments will abide by all safety and applicable guidelines as listed on the product label and Material Data Safety Sheet (MSDS). Any reclamation efforts requiring seeding will be done with certified, weed-free native seed.
18. The holder shall take all necessary steps to prevent or minimize soil erosion.
19. In accordance with Federal regulations in 43 CFR 2803.6-3, any proposed transfer of any right or interest in the right-of-way grant shall be filed with the BLM Authorized Officer. An application for assignment shall be accompanied by a showing of qualifications of the Assignee. The assignment shall be supported by a stipulation that the Assignee agrees to comply with and to be bound by the terms and conditions of the grant to be assigned. No assignment shall be recognized unless and until it is approved in writing by the Authorized Officer. In accordance with 43 CFR 2803.6-4, all filings for assignments shall be accompanied by a nonrefundable payment of \$50.00 from the Assignor.
20. The Holder shall notify the Authorized Officer if there is a significant variance from the approved action with respect to hazardous materials.
21. The effective date of this right-of-way grant is the date of execution by the Authorized Officer.
22. If the Holder violates any of the terms and conditions of this grant, the Authorized Officer, after giving written notice, may declare the grant terminated.
23. The holder(s) shall comply with all applicable Federal laws and regulations existing or hereafter enacted or promulgated. In any event, the holder(s) shall comply with the Toxic Substances Control Act of 1976, as amended (15 U.S.C. 2601, et seq.). With regard to any toxic substances that are used, generated by or stored on the right-of-way or on facilities authorized under this right-of-way grant see 40 CFR 761.1-761.193. Additionally, any release of toxic substances (leaks, spills, etc.) in excess of the reportable quantity established by 40 CFR, Part 117, shall be reported as required by the Comprehensive Environmental Response, Compensation and Liability Act of 1980. Section 102b. A copy of any report required or requested by any Federal agency or State government as a result of a reportable release or spill of any toxic substances shall be

furnished to the authorized officer concurrent with the filing of the reports to the involved Federal agency or State government.

24. The holder of Right-of-Way No. AZA 32315 agrees to indemnify the United States against any liability arising from the release of any hazardous substance or hazardous waste (as these terms are defined in the Comprehensive Environmental Response, Compensation and Liability Act of 1980, 42 USC 9601, et. seq., or the Resource Conservation and Recovery Act of 1976, 42 USC 6901, et. seq.) on the right-of-way. This agreement applies without regard to whether a release is caused by the holder, its agent, or unrelated third party.
25. Construction sites shall be maintained in a sanitary condition at all times; waste materials at those sites shall be disposed of promptly at an appropriate waste disposal site. "Waste" means all discarded matter including, but not limited to, human waste, trash, garbage, refuse, oil drums, petroleum products, ashes and equipment.
26. Construction occurring between March 1 and July 31, during the migratory bird breeding season, will require a pre-construction nest survey of the tower sites and access routes to encompass the proposed disturbed areas plus an additional 150' around the tower sites by a qualified contract biologist within two weeks of construction. If an active nest of a BLM species of conservation concern (as noted in the Arizona State Wildlife Action Plan) is found within the surveyed area, the biologist will determine a safe working distance from the nest so as not to flush the occupants from their nest. If construction cannot be carried out within 150' of the nest without flushing the nesting bird(s), then construction activities cannot take place until the young have fledged the nest. Upon completion of the survey, all active nests of BLM species of conservation concern discovered during the survey will be reported to the BLM Kingman District Biologist by the contract biologist.
27. The holder shall provide the BLM Authorized Officer with a bond for site testing and monitoring in the amount of \$2,000 per meteorological tower, totaling \$6,000.

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draft

CULTURAL RESOURCE SURVEY FOR THE
MOHAVE COUNTY WIND FARM PROJECT, ARIZONA:
SUPPLEMENTAL SURVEY FOR THREE METEOROLOGICAL
TOWERS AND ACCESS ROADS

prepared for

Kingman Field Office
Bureau of Land Management
2755 Mission Boulevard
Kingman, Arizona 86401
Cultural Resource Use Permit AZ-000074
Fieldwork Authorization BLM-AZ-31 0-10-10

sponsored by

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Phoenix, Arizona 85020

URS Cultural Resource Report 2011 - 11(AZ)

Restrict Distribution

To avoid vandalism, restrict information in this report about the location of archaeological sites, as provided for by
Section 304 of the National Historic Preservation Act, Section 9(a) of the Archaeological Resources Protection Act,
and Section 39-125 of the Arizona Revised Statutes.

Disclaimer

In preparing this report, URS Corporation used background information that was compiled by prior studies in the
project vicinity. URS Corporation relied on this information as furnished, and is neither responsible for nor has
confirmed the accuracy of this information.

May 2011

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ABSTRACT

Agency:	Bureau of Land Management (BLM)
Report Title and Date:	<i>Cultural Resource Survey for the Mohave County Wind Farm Project, Arizona: Supplemental Survey for Three Meteorological Towers and Access Roads (draft).</i> May 2011
Permits:	BLM Cultural Resource Use Permit AZ-000074, Fieldwork Authorization BLM-AZ-310-10-10
Project Number:	URS Job 23445692
Project Description:	<p>BP Wind Energy North America LLC (BPWENA) is proposing to develop a wind-powered electrical generation facility with a capacity to generate up to 425 megawatts of power. The proposed project would be in the White Hills of Mohave County, Arizona, on public land managed by the BLM Kingman Field Office and adjacent Federal land withdrawn from the public domain for reclamation purposes and managed by the Bureau of Reclamation (Reclamation). BPWENA submitted applications to BLM and Reclamation for rights-of-way for commercial wind energy development, and in conjunction with reviewing those applications, BLM is serving as the lead Federal agency for preparing an environmental impact statement (EIS) pursuant to the National Environmental Policy Act. In conjunction with preparing the EIS, BLM also is serving as the lead Federal agency in considering effects of the proposed wind farm on properties listed in or eligible for the National Register of Historic Places (National Register) pursuant to Section 106 of the National Historic Preservation Act and BLM's implementing policies.</p> <p>BPWENA and BLM retained URS Corporation (URS) as a third-party consultant to assist BLM in preparing the EIS and complying with Section 106. URS prepared a cultural resources overview that augments an overview that BLM had previously completed for much of northwestern Arizona. The overview has since been supplemented twice as the project design was modified. URS also prepared a plan for a Class III (intensive pedestrian) survey and a draft report of the Class III survey results. Recently, the proposed Senator Solar project, adjacent to the southwestern part of the proposed wind farm right-of-way, was abandoned and the right-of-way application for that project was withdrawn. BPWENA is proposing to incorporate part of that released solar project parcel into the wind farm right-of-way to take advantage of the availability of land with terrain that is easier to develop, to ensure sufficient capacity to generate up to 425 megawatts of electrical energy and, at BLM's request, to consider shifting some of the proposed turbine locations from the northern part of the wind farm right-of-way to the additional area to reduce visual impacts on views from the Lake Mead National Recreation Area. To evaluate the potential wind energy within that released solar project parcel, BPWENA is planning to install three meteorological (met) towers within the parcel.</p> <p>To support BLM review of the proposed installation of the three met towers pursuant to the National Environmental Policy Act and Section 106 of the National Historic Preservation Act, a Class III (intensive pedestrian) cultural resource survey was conducted. This report documents the goals, methods, and results of that survey.</p>

Location: 44 The proposed wind farm would be built in the White Hills about 40 miles (65 km)
45 northwest of Kingman. The three proposed met towers are in Sections 7, 19, and 32,
46 Township 28 North, Range 20 West, Gila and Salt River meridian, which is mapped on
47 the Senator Mountain SW, Arizona, U.S. Geological Survey 7.5-minute topographic
48 quadrangle.

Scope of Project and Jurisdiction: 49 The area of potential effects was defined as areas of potential terrain disturbance at the
50 proposed met tower locations and routes of overland travel to access the tower locations
51 from existing roads. Those areas accumulate to about 6.8 acres (2.8 hectares). (The use
52 of existing roads is not expected to result in new ground disturbance and they were not
53 included in the area of potential effects.) The supplemental survey covered 95.0 acres
54 (38.4 hectares) of public land managed by BLM, encompassing the area of potential
55 effects and a buffer.

Personnel and Dates of Fieldwork: 56 Chad Kirvan, serving as the crew leader, and Arturo Montana of the Hualapai
57 Department of Cultural Resources, conducted the survey on 20 and 21 April 2011,
58 devoting 4 person-days to the fieldwork. Dr. A.E. (Gene) Rogge served as principal
59 investigator.

National Register Eligible Properties: 60
61 None within the area of potential effects.

National Register Ineligible Properties: 62
63
64 Isolated feature IO 106, a 1955 cadastral survey marker and an associated rock pile,
65 was previously recorded along the corridor of the main access road for the proposed wind
66 farm.

Conclusion and Recommendations: 67
68 The proposed overland travel route for the northern met tower would cross beneath the
69 existing Mead-Liberty 345kV transmission line. Although the line does not yet meet the
70 National Register guideline of being 50 years old, an evaluation recommended that 17
71 miles (27.4 km) of the line in the Lake Mead National Recreation Area be considered
72 eligible for the National Register under Criterion A because the design of that segment of
73 the line is an early example of incorporation of aesthetic factors. The closest part of that
74 segment of the line is about 5 miles (8 km) west of the proposed expansion of the wind
75 farm right-of-way. The portion of the Mead-Liberty 345kV transmission line within the
76 wind farm right-of-way and the proposed expansion parcel was not evaluated as having
77 historical significance that would make it eligible for the National Register.

78 One of the existing roads that would be used for access was previously recorded as
79 Stone's Ferry Road, AZ F:3:43(ASM), and recommended as eligible for the National
80 Register under Criterion D, but use of the road for installation and monitoring of the met
81 towers is not expected to result in any disturbance beyond that of the ongoing use of the
82 road (mostly for ranching).

83
84 In summary, no historic properties eligible for the National Register have been identified
85 within the area of potential effects of the proposed three met towers and associated routes
86 of overland travel. It is recommended that BLM make a determination that the proposed
87 installation of the three met towers would result in no historic properties affected.

**CULTURAL RESOURCE SURVEY FOR THE MOHAVE COUNTY WIND FARM PROJECT, ARIZONA:
SUPPLEMENTAL SURVEY FOR THREE METEOROLOGICAL TOWERS AND ACCESS ROADS**

INTRODUCTION

BP Wind Energy North America LLC (BPWENA) is proposing to develop a wind-powered electrical generation facility with a capacity to generate up to 425 megawatts of power. The proposed project would be in the White Hills of Mohave County, Arizona, on public land managed by the Bureau of Land Management (BLM) Kingman Field Office and adjacent Federal land withdrawn from the public domain for reclamation purposes and managed by the Bureau of Reclamation (Reclamation). BPWENA submitted applications to BLM and Reclamation for rights-of-way for commercial wind energy development, and in environmental impact statement (EIS) pursuant to the National Environmental Policy Act. Reclamation and the Western Area Power Administration, National Park Service, Hualapai Tribe, Arizona Game and Fish Department, and Mohave County are serving as cooperating agencies for preparation of the EIS. In conjunction with preparing the EIS, BLM also is serving as the lead Federal agency in considering effects of the proposed wind farm on properties listed in or eligible for the National Register of Historic Places (National Register) pursuant to Section 106 of the National Historic Preservation Act and BLM's implementing policies.

To be eligible for the National Register, properties must be 50 years old (unless they have special significance) and have national, state, or local significance in American history, architecture, archaeology, engineering, or culture. They also must possess integrity of location, design, setting, materials, workmanship, feeling, and association, and meet at least one of four criteria:

Criterion A: be associated with significant historical events or trends

Criterion B: be associated with historically significant people

Criterion C: have distinctive characteristics of a style or type, or have artistic value, or represent a significant entity whose components may lack individual distinction

Criterion D: have yielded or have potential to yield important information (Title 36, Code of Federal Regulations, Part 60.4)

Pursuant to best management practices identified in the BLM (2005) final programmatic EIS for wind energy development, BLM initiated Section 106 consultations early in the EIS process, and if the project is approved, consideration of cultural resources would continue into post-EIS phases of construction and operation.

BPWENA and BLM retained URS Corporation (URS) as a third-party consultant to assist BLM in preparing the EIS and complying with Section 106. To initiate the Section 106 process, URS prepared a cultural resources overview (Rogge and others 2010) that augments an overview that BLM had previously completed for much of northwestern Arizona (Stone 1987). The overview was supplemented when the project design was modified and the project location was shifted (Rogge 2011a). URS also prepared a plan for a Class III (intensive pedestrian) cultural resource survey that identified 5,250 acres (2,125 hectares) for survey (Rogge 2010). After the project design and location were modified, the scope of the Class III survey was expanded by almost 2,000 acres. A report of the Class III survey results has been drafted (Kirvan and others 2011).

Subsequently, the proposed Senator Solar project adjacent to the southwestern part of the proposed wind farm right-of-way was abandoned and the right-of-way application for that project was withdrawn. BPWENA is proposing to incorporate part of that released parcel into the wind farm right-of-way to take advantage of the availability of land with terrain that is easier to develop, to ensure sufficient capacity to

generate up to 425 megawatts of electrical energy and, at BLM's request, to consider shifting some of the proposed turbine locations from the northern part of the wind farm right-of-way to the additional area to reduce visual impacts on views from the Lake Mead National Recreation Area. To evaluate the potential wind energy within that released solar project parcel, BPWENA is planning to install three meteorological (met) towers within the parcel.

To support BLM's review of the proposed installation of the three met towers pursuant to the National Environmental Policy Act and Section 106 of the National Historic Preservation Act, a Class III (intensive pedestrian) cultural resource survey was conducted. This report documents the goals, methods, and results of that survey. Because the environmental setting of the project, the cultural history of the region, results of the records review, and relevant historic contexts are discussed in the survey plan and the original and supplemental cultural resource overview, as well as another supplement for the released solar project parcel (Rogge 2011 b), that information is not repeated in this report.

Project Location

The proposed wind farm would be built in the White Hills about 40 miles (65 km) northwest of Kingman (Figure 1). The proposed expansion of the wind farm right-of-way is adjacent to the southwest boundary of the currently proposed right-of-way (Figure 2). The three proposed met towers are in Sections 7, 19, and 32, Township 28 North, Range 20 West, Gila and Salt River meridian, which is mapped on the Senator Mountain SW, Arizona, U.S. Geological Survey (USGS) 7.5-minute topographic quadrangle (Table 1, Figure 3).

Table 1. Surveyed Areas

Tower	Location*	Acres Surveyed	Overland Travel Route		
			Location	Length (miles)	Acres Surveyed
Northern	NE1/4 Section 7	3.7	E1/2 Section 7	0.5	15.8
Central	NE1/4 Section 19	3.7	Section 19	1.9 ²	36.6
Southern	NW1/4 Section 32	3.7	N1/2 Section 31, NW1/4 Section 32	1.0	31.5
totals		11.1		3.4	83.9

NOTE: ¹ in Township 28 North, Range 20 West, Gila and Salt River Meridian

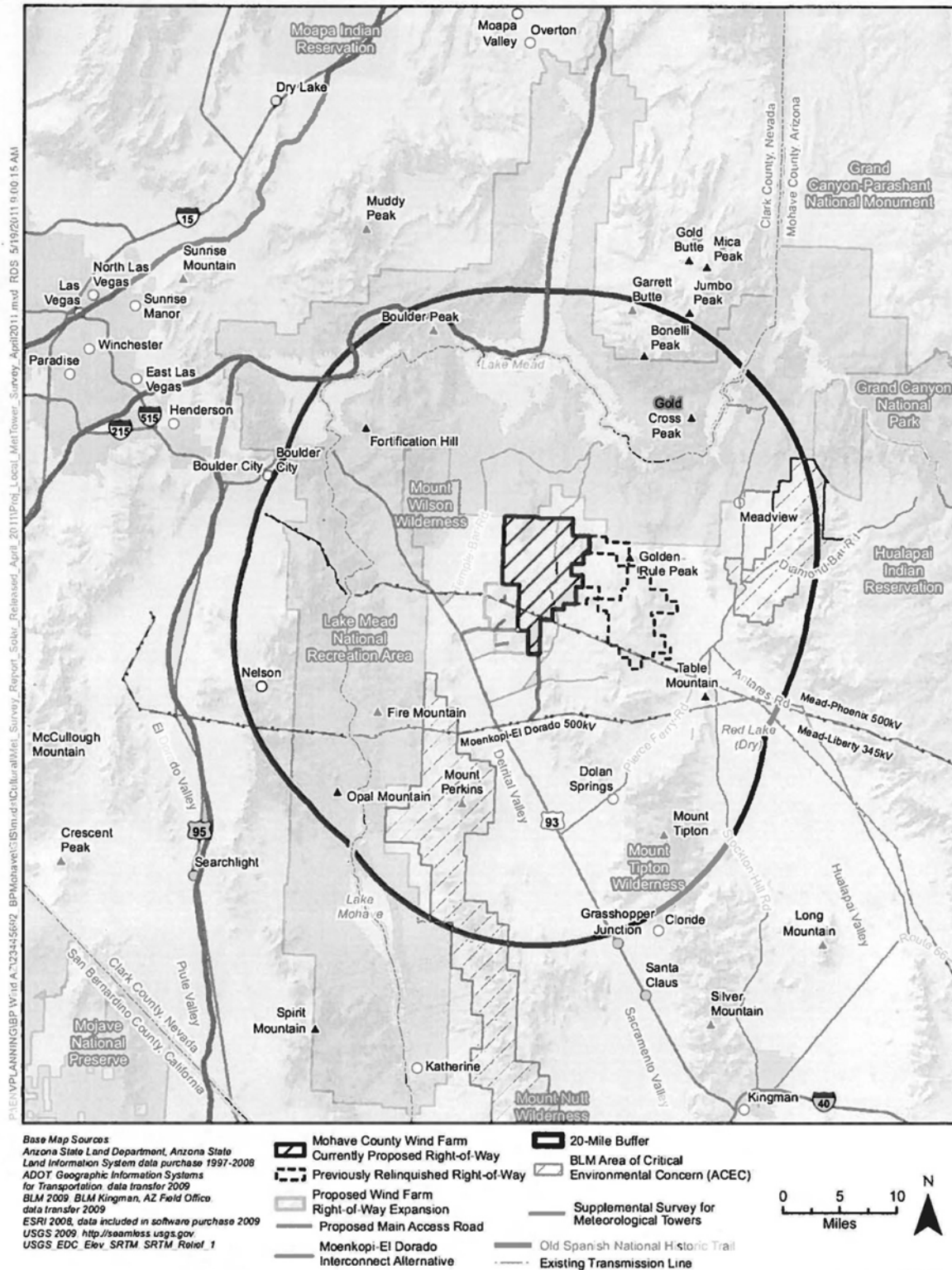
² about 0.75 mile of this route along the proposed main access road for the wind farm was previously surveyed

Project Description and Area of Potential Effects

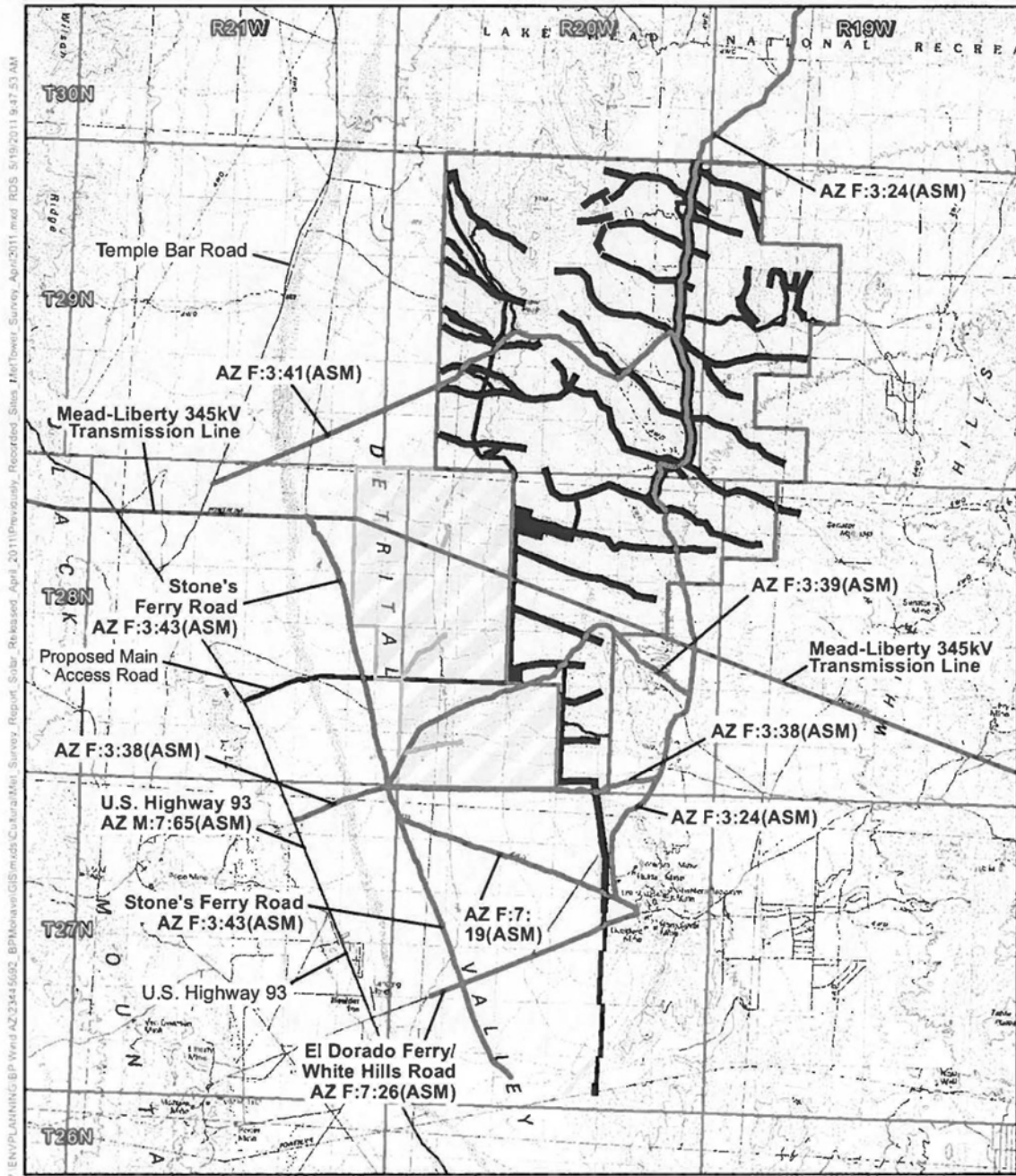
The three met towers would be built of light-weight, galvanized, gray steel tubing that slides together without bolts or clamps. Each tower would be transported in pieces using 4-wheel-drive trucks and assembled on site. The sections would be assembled horizontally on the ground and then tilted up using a gin pole and winch; no fencing, utilities, welding, cranes, concrete work, grading, or road building would be required.

Each met tower would rest on a 3-foot by 3-foot steel base plate and be anchored with guy wires secured to the ground a maximum of 165 feet (50 meters [m]) from the base of the tower. The total occupied area would be approximately 9 square feet (0.8 square m) for each tower. All ground disturbances would be confined within 200 feet (61 m) of the base of the towers.

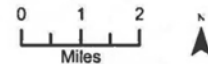
Existing roads would be used for access to the maximum extent possible. Those roads would be used without improvements and that use is not expected to result in any new ground disturbance. About 3.4 miles (5.5 km) of overland travel will be required to access the three met tower locations from the closest existing roads (refer to Table 1). Overland travel would result in vehicle tracks about 10 feet wide.



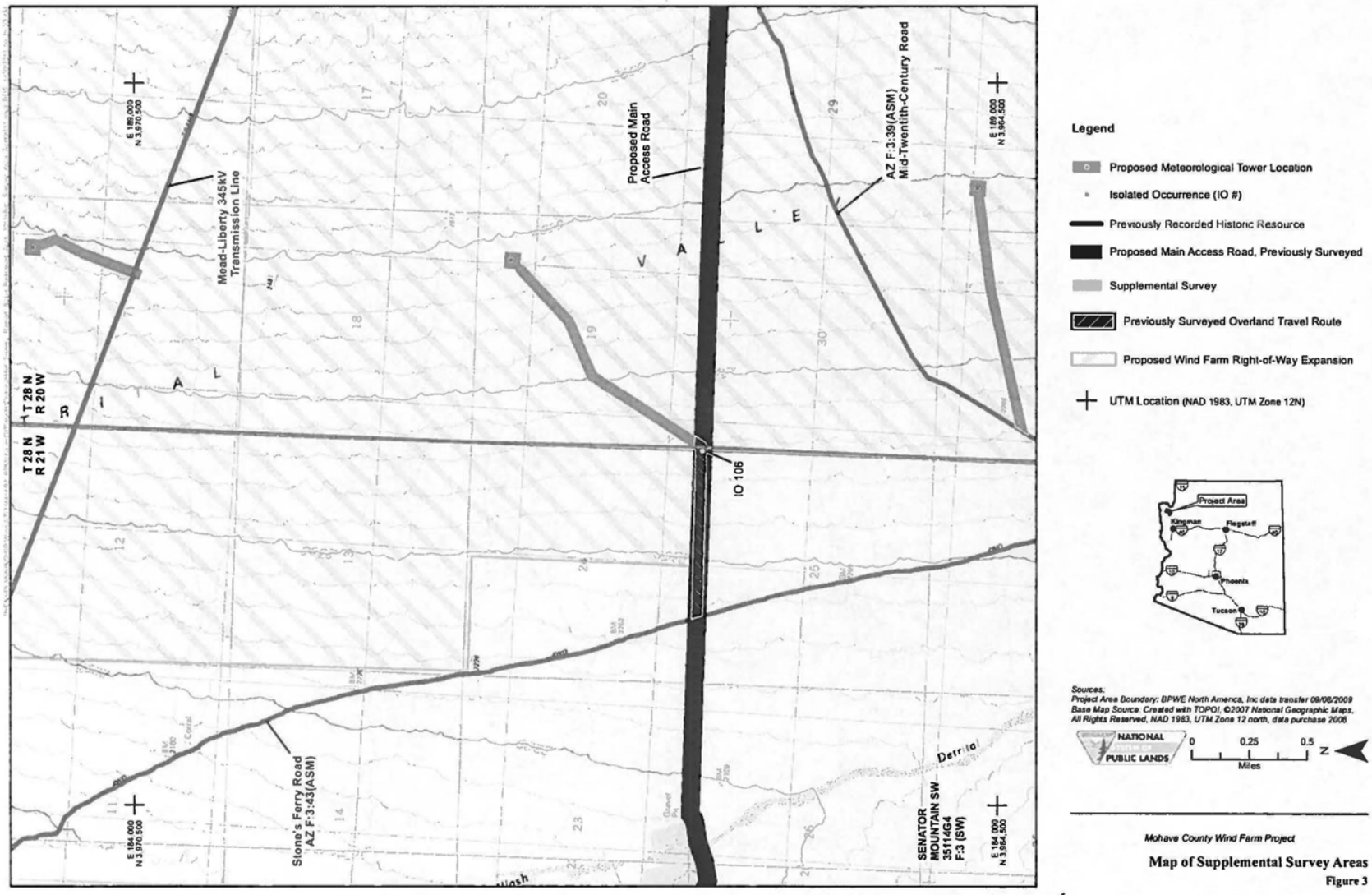
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- Supplemental Survey for Meteorological Towers
- Historical Road or Transmission Line
- Previously Surveyed Area
- Moenkopi-El Dorado Interconnection Alternative
- Currently Proposed Right-of-Way
- Proposed Wind Farm Right-of-Way Expansion



Map of Proposed Wind Farm Right-of-Way
Figure 2



The northern met tower can be accessed from the paved Temple Bar Road via the maintenance road along the corridor for the Mead-Liberty 345-kilovolt (kV) and the adjacent Mead-Phoenix 500kV transmission lines (refer to Figure 2). Construction of the Mead-Liberty 345kV transmission line, which is a component of the Pacific Northwest/Pacific Southwest Intertie Project, was completed in 1967. Although the line does not yet meet the National Register guideline of being 50 years old, an evaluation recommended that 17 miles (27.4 km) of the line in the Lake Mead National Recreation Area be considered eligible for the National Register under Criterion A because the design of that segment of the line is an early example of incorporation of aesthetic factors (Schweigert 2004). The closest part of that segment of the line is about 5 miles (8 km) west of the proposed expansion of the wind farm right-of-way. About 0.5 mile (0.8 km) of overland travel would be required from the transmission line maintenance road, which is situated on the south side of the two transmission lines, to reach the tower location to the north. The overland route would cross beneath the existing transmission lines.

The central met tower can be accessed by traveling about 3.3 miles (5.3 km) along a road branching south from the transmission line maintenance road to the alignment of the proposed main access road for the wind farm, and then traveling overland for about 1.9 miles (3.1 km) (refer to Figure 2). The prior Class III survey along the proposed main access road for the wind farm identified and recorded the road branching south of the transmission line corridor as Stone's Ferry Road, AZ F:3:43(ASM) (Kirvan and others 2011). Stone's Ferry was established at the confluence of the Colorado River and Detrital Wash probably in the 1860s. Daniel Bonelli apparently purchased the ferry in 1875 and moved it upstream about 3 miles (5 km) to the Virgin River confluence. The road south of the ferry along Detrital Valley was an important regional road in the late nineteenth century (Messersmith 1991). The Class III survey recommended that Stone's Ferry Road be considered eligible for the National Register for its potential to yield important information (Criterion D), but the recorded segment along the proposed main access road from U.S. Highway 93 had no associated artifacts or features that could yield information.

The southern met tower could be accessed by continuing south on the Stone's Ferry Road about 2.1 miles (3.4 km) and then turning to the northeast along another road and traveling about 0.8 mile (1.3 km) before leaving the road and traveling overland for about 1 mile (1.6 km) (refer to Figure 2). The prior Class III survey for the proposed wind farm recorded the road branching to the northeast from Stone's Ferry Road as an unnamed mid-twentieth-century road, AZ F:3:39(ASM), and recommended that it be considered ineligible for the National Register (Kirvan and others 2011).

The central and southern towers could be accessed from U.S. Highway 93 by using the paved White Hills Road or an existing dirt road about 4 miles (6.4 km) to the northwest to access the Stone's Ferry Road (refer to Figure 2). The prior Class III survey for the wind farm recorded the White Hills Road, which follows the alignment of the nineteenth-century ElDorado Ferry Road, as AZ F:7:26(ASM), and the road to the north as an unnamed mid-twentieth-century road, AZ F:3:38(ASM). Both of these roads were evaluated as ineligible for the National Register (Kirvan and others 2011).

The area of potential effects was defined as areas of potential terrain disturbance at the proposed met tower locations and the routes of overland travel. Those areas accumulate to about 6.8 acres (2.8 hectares). The use of existing roads is not expected to result in new ground disturbance and they were not included in the area of potential effects.

Project Team and Permit

The supplemental field survey was conducted in accordance with the terms of BLM Cultural Resource Use Permit AZ-000074 and Fieldwork Authorization BLM-AZ-310-10-10. Chad Kirvan, serving as the crew leader, and Arturo Montana of the Hualapai Department of Cultural Resources, conducted the survey on 20

and 21 April 2011, devoting 4 person-days to the fieldwork. Dr. A.E. (Gene) Rogge served as principal investigator.

SURVEY METHODS

The archaeological crew conducted the survey using the same methods as those used by the prior Class III survey for the project, which involves walking transects at intervals of no more than 65 feet (20m). A 400-by-400-foot (120-by-120-m) area was surveyed at each of the three met tower locations by walking six 400-foot (120-m) long transects across an area centered on the planned location of the towers. The routes of overland travel that will be used to access the met towers from existing roads were surveyed by walking four transects, two on each side of the centerlines, for a total width of 260 feet (80 m).

The survey areas were identified with USGS 7.5-minute topographic quadrangles, aerial photographs, and a Trimble GeoExplorer XT global positioning system (GPS) instrument that was used for navigating and mapping. The instrument has an accuracy of ± 3 feet (1 m) or better. The archaeological crew staked the centerlines of the surveyed overland travel routes with laths and flagging tape at intervals of approximately 500 feet (150 m). The alignments also were recorded with the GPS instrument and shape files were generated with Pathfinder Office and ArcView GIS software and provided to BPWENA.

The overland travel route to the central met tower will use approximately 0.75 mile (1.2 km) of the proposed main access road for the wind farm from U.S. Highway 93, which was surveyed in 2010. The crew walked along that corridor to access the central met tower, but did not resurvey that corridor. The prior survey identified one isolated feature (10 106) within the corridor for the overland travel route (refer to Figure 3). That feature is a 1955 cadastral survey section corner marker and an associated rock pile, and was evaluated as ineligible for the National Register (Kirvan and others 2011), but vehicles traveling to the central met tower would avoid and not disturb the section corner marker.

The supplemental survey covered 95.0 acres (38.4 hectares). About 11.1 acres (4.5 hectares) were surveyed at the three met towers to cover the area of potential effects and a surrounding buffer. About 83.9 acres (34.0 hectares) were surveyed along the overland travel routes, which is substantially wider than the area of potential effects but provides flexibility in selecting a specific route of travel.

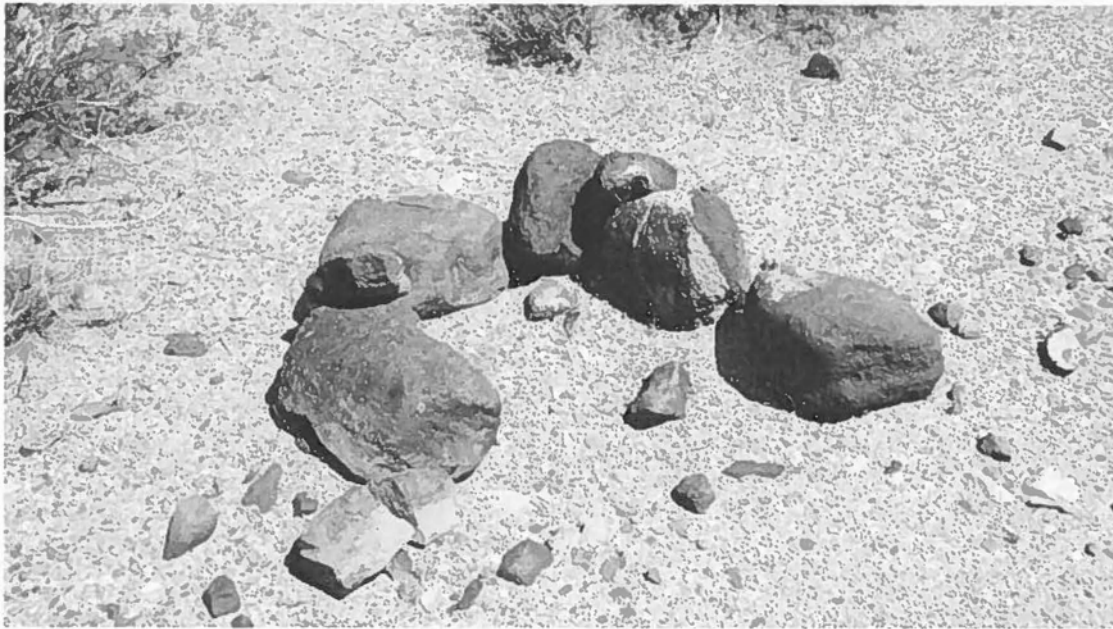
SURVEY RESULTS

Ground visibility was at least 80 percent in the survey area, and vegetation cover was not a constraint in identifying artifacts and archaeological features. The supplemental survey discovered no archaeological or historical sites or isolated occurrences of artifacts or features.

The crew did make additional observations along the Stone's Ferry Road, AZ F:3:43(ASM), and identified possible historical campsites and other artifacts associated with use of the road.

While traveling along Stone's Ferry Road to access the survey areas for the met towers, the crew noted historical artifacts along the road and three possible campsites. Each of the campsites had a rock feature and various artifacts. One campsite had rocks stacked to provide a wind break for a small campfire (**Photograph 1**) and a couple of hole-in-cap cans. The second campsite had a rock ring and hole-in-cap cans, glass, historic ceramics, a two-tined fork, and part of a horseshoe. The third campsite had a disturbed rock ring and cans, bottle glass, and another fragment of a horseshoe. Other artifacts observed along the road included a 5-gallon pail and a metal gas can.

The Stone's Ferry Road continues to be used, probably mostly to access three livestock watering stations and a corral that the survey crew noted along Stone's Ferry Road (**Photograph 2**). Those grazing facilities were similar to others recorded by prior Class III survey for the wind farm, and included unusual



Photograph 1. Campfire Ring along Stone's Ferry Road



Photograph 2. Corral along Stone's Ferry Road (view to northeast)

rubberized canvas watering troughs (apparently made from military surplus fuel bladders) like those recorded at sites AZ F:3:28, 29, and 30(ASM) (Kirvan and others 2011).

CONCLUSIONS AND RECOMMENDATIONS

The proposed overland travel route for the northern met tower would cross beneath the existing Mead- Liberty 345kV transmission line. Although the line does not yet meet the National Register guideline of being 50 years old, an evaluation recommended that 17 miles (27.4 km) of the line in the Lake Mead National Recreation Area be considered eligible for the National Register under Criterion A

because the design of that segment of the line is an early example of incorporation of aesthetic factors. The closest part

of that segment of the line is about 5 miles (8 km) west of the proposed expansion of the wind farm right-of-way. The portion of the Mead-Liberty 345kV transmission line within the wind farm right-of-way and the proposed expansion parcel was not evaluated as having historical significance that would make it eligible for the National Register.

One of the existing roads that would be used for access was previously recorded as Stone's Ferry Road, AZ F:3:43(ASM), and recommended as eligible for the National Register under Criterion D, but use of the road for installation and monitoring of the met towers is not expected to result in any disturbance beyond that of the ongoing use of the road (mostly for ranching).

In summary, no historic properties eligible for the National Register have been identified within the area of potential effects of the proposed three met towers and associated routes of overland travel. It is recommended that BLM make a determination that the proposed installation of the three met towers would result in no historic properties affected.

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